

## ABSTRACT OF THE DISCLOSURE

Optical communication system apparatus and methods of operating an optical communications system is described. The system advantageously may utilize existing optical fiber networks and  
5 provide significantly increased channel capacity. In accordance with one aspect of the invention the system apparatus provides for a plurality of communications channels and a processor unit receives requests for allocation of one or more channels from a node coupled to the optical communications system. The system apparatus dynamically allocates one or more channels selected from unused channels.